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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,648	04/08/2004	Ata Zadehgoi	P18563 (INTEL29)	8505
6980	7590	01/12/2006	EXAMINER	
TROUTMAN SANDERS LLP 600 PEACHTREE STREET, NE ATLANTA, GA 30308			GLENN, KIMBERLY E	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/820,648

**Applicant(s)**

ZADEHGOL ET AL.

**Examiner**

Kimberly E. Glenn

**Art Unit**

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-16 and 19-28 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

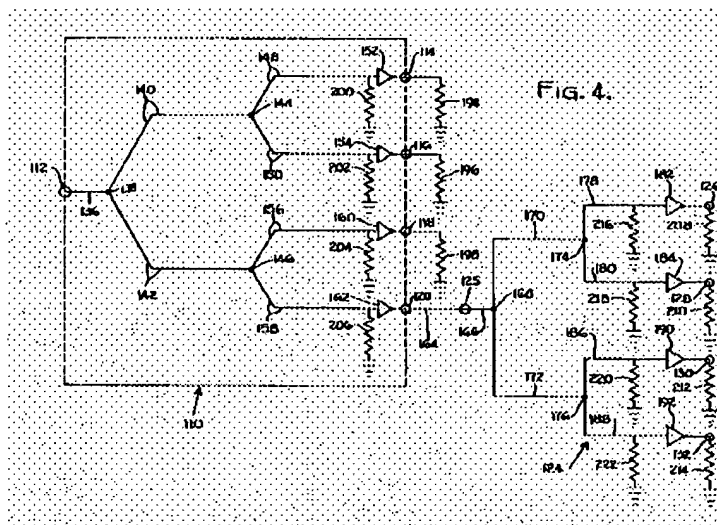
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7-12, 14-16 and 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barczys US Patent 4,885,557 in view of Abouzahara et al US Patent 4,947,143. (Both of record)

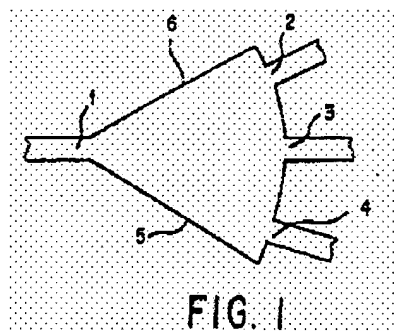
Barczys disclose in figure a first multicoupler 100 connected to an input signal 112 and having a first output 118 and a second output 120; a termination resistor 204 connected to the first output and second multicoupler 124 connected to the second output 120 and having a plurality of outputs. A plurality of amplifiers are connected to the plurality of outputs. The amplifiers are connected to matching resistors. Inherently, transmission lines connected between the amplifier and the matching resistors.

Applicant states in column 6; lines 21-22, with reference to the figure 3, that impedance match exists within the network, and that the length of the transmission lines cables are irreverent.



Thus, all the limitation of the claims are shown with the exceptions of the output having equal phase and equal magnitude, the pie type impedance matching body section having a wedge shaped geometry and the pie type impedance matching section comprising a conductive material.

Abouzahara et al disclose in figure 1 a fan (pie) shaped divider/combiner comprising a plurality of ports (1-4). Abouzahara et al disclose in the abstract the planar configuration provides to a balanced phase and amplitude outputs.



One of ordinary skill in the art would have found it obvious to replace the second multicoupler of Barczys with the divider/combiner as taught by Abouzahara et al since the examiners takes notices of the equivalence of the multicoupler and the divider/

combiner for their use in the a transmission line art and selection of any these known equivalents to provide a splitting means would be within the level of ordinary skill in the art.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barczys US Patent 4,885,557 in view of Abouzahara et al US Patent 4,947,143 in combination with Leonakis US Patent 5,025,233. (All of record)

See the rejection of claims 1-4, 7-12, 14-16 and 19-28 for detailed discussion of Barczys and Abouzahara et al references.

Thus, Barczys in view of Abouzahara et al are shown to teach all the limitation of the claims with the exception of the conductive material of the pie type impedance matching section being copper.

Leonakis disclose a power divider composed of a copper stripline. (Column 3; line 18-28)

One of ordinary skill in the art would have found it obvious to use copper for the conductive material of the divider/ combiner of Schellenberg as taught by Leonakis. It have been held to within the general skill of a one of ordinary skill in the art to selected a known material on the basis of its suitability for the intended use as signal conducting means.

### ***Response to Arguments***

Applicant's arguments filed 10/27/05 have been fully considered but they are not persuasive. Examiner has modified the rejection slightly, the clarity examiner position with regards to the references. The rejection has been change to states the only the

second multicoupler of Barczys is replaced with the fan (pie) shaped divider of Abouzahra et al. With regard to applicant arguments that the first multicoupler is not an input matching section. Barczys states that an impedance match exists within the network. Therefore the first multicoupler does provide matching. With regards to applicant arguments regarding the termination resistor, the termination resistors are connected to the output through the amplifiers. Therefore, based on the broadest interpretation of the claim language a termination section is connected to the first output.

***Allowable Subject Matter***

Claims 5, 6, 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record does not disclose or fairly teach the termination section comprising of resistor and capacitor connected to each other.

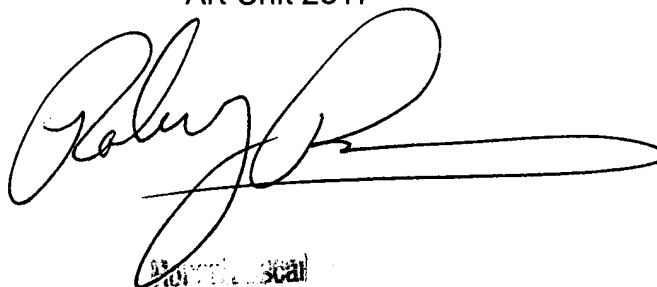
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E. Glenn whose telephone number is (571)-272-1761. The examiner can normally be reached on Monday-Friday 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly E Glenn  
Examiner  
Art Unit 2817

keg

A handwritten signature in black ink, appearing to read 'Kimberly E Glenn', with a long horizontal flourish extending to the right.

**Supervisory Patent Examiner**  
**Technology Center 2800**